Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A control apparatus for use with an on-vehicle generator provided with a stator winding and a field winding and driven to rotate by an on-vehicle engine, the control apparatus comprising:

~~a~~ single power ~~supply~~supplying means, which is directly connected to an output terminal of the generator, providing current to the field winding to excite the field winding;

~~a storage element~~ chargeable storage means ~~and~~ directly connected ~~directly~~ to the output terminal of the generator;

a switching circuit having a switching element configured to be turned on and off and to selectably and electrically connect or disconnect a current path between the field winding and the output terminal; and

a regeneration circuit configured to provide, through the terminal, the storage ~~element~~ means with current flowing through the field winding depending on magnetic energy preserved in the field winding when the switching element is turned off.

2. (Currently Amended) The control apparatus according to claim 1, wherein the switching element is placed in the switching circuit so that the current flowing through the field winding when the current is supplied to the storage ~~element~~ means is the same in a current flowing direction as the current flowing through the field winding when the power ~~supply~~ supplying means provides the field winding with current.

3. (Currently Amended) The control apparatus according to claim 2, wherein the field winding has two terminals, the power ~~supply~~ supplying means has positive and negative terminals, and the storage ~~element~~ means has positive and negative pole terminals;

the switching element includes a first switch placed, through the output terminal, to connect one terminal of the field winding and the positive terminal of the power ~~supply~~ supplying means and a second switch placed to connect the other terminal of the field winding and the negative terminal of the power ~~supply~~supplying means; and

the regeneration circuit includes a first diode placed to connect the one terminal of the field winding and the negative pole terminal of the storage ~~element~~ means and a second diode placed, through the output terminal, to connect to the other terminal of the field winding and the positive pole terminal of the storage ~~element~~means.

4. (Currently Amended) The control apparatus according to claim 2, wherein the field winding has two terminals, the power ~~supply~~ supplying means has positive and negative terminals, and the storage ~~element~~ means has positive and negative pole terminals; wherein

the switching element includes a first switch placed, through the output terminal, to connect one terminal of the field winding and the positive terminal of the power ~~supply~~ supplying means and a second switch placed to connect the other terminal of the field winding and the negative terminal of the power ~~supply~~supplying means;

the regeneration circuit includes a third switch placed to connect the one terminal of the field winding and the negative pole terminal of the storage ~~element~~ means and a fourth switch placed, through the output terminal, to connect the other terminal of the field winding and the positive pole terminal of the storage ~~element~~means; and

an on/off control unit configured to bring the third and fourth switches into an off-state when the first and second switches are in an on-state and to bring the third and fourth switches into an on-state when the first and second switches are in an off-state.

5. (Previously Presented) The control apparatus according to claim 4, wherein the on/off control unit is configured to turn off both of the third and fourth switches when the

current flowing through the field winding under the off-state of both of the first and second switches becomes zero.

6. (Previously Presented) The control apparatus according to claim 4, wherein the on/off control unit is configured to turn on and off both of the first and second switches at intervals of time less than 1/10 of a time constant of the field winding.

7. (Currently Amended) The control apparatus according to claim 1, wherein the field winding has two terminals, the power ~~supply~~ supplying means has positive and negative terminals, and the storage ~~element~~ means has positive and negative pole terminals; wherein

the switching element includes a first switch placed, through the output terminal, to connect one terminal of the field winding and the positive terminal of the power ~~supply~~ supplying means and a second switch placed to connect the other terminal of the field winding and the negative terminal of the power ~~supply~~supplying means; and

the regeneration circuit includes a first diode placed to connect the one terminal of the field winding and the negative pole terminal of the storage ~~element~~ means and a second diode placed, through the output terminal, to connect the other terminal of the field winding and the positive pole terminal of the storage ~~element~~means.

8. (Currently Amended) The control apparatus according to claim 1, wherein the field winding has two terminals, the power ~~supply~~ supplying means has positive and negative terminals, and the storage ~~element~~ means has positive and negative pole terminals; wherein

the switching element includes a first switch placed, through the output terminal, to connect one terminal of the field winding and the positive terminal of the power ~~supply~~ supplying means and a second switch placed to connect the other terminal of the field winding and the negative terminal of the power ~~supply~~supplying means;

the regeneration circuit includes a third switch placed to connect the one terminal of the field winding and the negative pole terminal of the storage ~~element~~ means and

a fourth switch placed, through the output terminal, to connect the other terminal of the field winding and the positive pole terminal of the storage ~~element~~means; and

an on/off control unit configured to bring the third and fourth switches into an off-state when each of the first and second switches are in an on-state and to bring the third and fourth switches into an on-state when each of the first and second switches are in an off-state.

9. (Previously Presented) The control apparatus according to claim 8, wherein the on/off control unit is configured to turn off both of the third and fourth switches when the current flowing through the field winding under the off-state of both of the first and second switches becomes zero.

10. (Previously Presented) The control apparatus according to claim 8, wherein the on/off control unit is configured to turn on and off both of the first and second switches at intervals of time less than 1/10 of a time constant of the field winding.

11. (Currently Amended) An on-vehicle power supply system comprising:

a control apparatus for use with an on-vehicle generator provided with a stator winding and a field winding and driven to rotate by an on-vehicle engine;

~~a~~ single power ~~supply~~supplying means, which is directly connected to an output terminal of the generator, providing current to the field winding to excite the field winding, and

~~a~~ chargeable storage ~~element~~ means directly connected ~~directly~~ to the output terminal of the generator ~~and electrically connected to the power supply in parallel~~;

wherein the control apparatus comprises:

a switching circuit having a switching element configured to be turned on and off and to selectably and electrically connect or disconnect a current path between the field winding and the terminal; and

a regeneration circuit configured to provide, through the terminal, the storage ~~element~~ means with current flowing through the field winding depending on magnetic energy preserved in the field winding when the switching element is turned off.

12. (Previously Presented) The on-vehicle power supply system according to claim 18, wherein the switching element is placed in the switching circuit so that the current flowing through the field winding when the current is supplied to the battery is the same in a current flowing direction as the current flowing through the field winding when the battery provides the field winding with the current.

13. (Previously Presented) The on-vehicle power supply system according to claim 12, wherein the field winding has two terminals and the battery has positive and negative terminals; wherein

the switching element includes a first switch placed, through the output terminal, to connect one terminal of the field winding and the positive terminal of the battery and a second switch placed to connect the other terminal of the field winding and the negative terminal of the battery; and

the regeneration circuit includes a first diode placed to connect the one terminal of the field winding and the negative terminal of the battery and a second diode placed, through the output terminal, to connect the other terminal of the field winding and the positive terminal of the battery.

14. (Previously Presented) The on-vehicle power supply system according to claim 12, wherein the field winding has two terminals and the battery has positive and negative terminals; wherein

the switching element includes a first switch placed, through the output terminal, to connect one terminal of the field winding and the positive terminal of the battery

and a second switch placed to connect the other terminal of the field winding and the negative terminal of the battery;

the regeneration circuit includes a third switch placed to connect the one terminal of the field winding and the negative pole terminal of the battery and a fourth switch placed, through the output terminal, to connect the other terminal of the field winding and the positive pole terminal of the battery; and

an on/off control unit configured to bring the third and fourth switches into an off-state when each of the first and second switches are in an on-state and to bring the third and fourth switches into an on-state when each of the first and second switches are in an off-state.

15. (Previously Presented) The on-vehicle power supply system according to claim 14, wherein the on/off control unit is configured to turn off both of the third and fourth switches when the current flowing through the field winding under the off-state of both of the first and second switches becomes zero.

16. (Previously Presented) The control apparatus according to claim 14, wherein the on/off control unit is configured to turn on and off both of the first and second switches at intervals of time less than 1/10 of a time constant of the field winding.

17. (Canceled)

18. (Currently Amended) A control apparatus for use with an on-vehicle generator provided with a stator winding and a field winding and driven to rotate by an on-vehicle engine, the control apparatus comprising:

a single battery serving as both of ~~a~~ power ~~supply~~ supplying means providing current to the field winding to excite thereof and ~~a~~ storage ~~element~~ means that is chargeable, the battery being directly connected ~~directly~~ to an output terminal of the generator;

a switching circuit having a switching element configured to be turned on and off and to selectably and electrically connect or disconnect a current path between the field winding and the terminal connected to the battery; and

a regeneration circuit configured to provide, through the terminal, the storage ~~element~~ means with current flowing through the field winding depending on magnetic energy preserved in the field winding when the switching element is turned off.